Conclusion

When North Korean forces crossed the 38th Parallel on 25 June 1950, U.S. strategic planners were ill prepared to react. The relatively minor role Korea played in American policymaking in Asia meant that U.S. military forces in the area were focused instead on the Japanese home islands, Okinawa and Taiwan. All of the diplomatic players regarded the division of Korea along the Parallel as a temporary expedient, and the possibility existed that someday, peacefully, the Soviet Union (which bordered North Korea) might dominate the entire peninsula.

Geopolitical realities aside, official Washington could not ignore the North Korean invasion. Watching the Korean Peninsula slide into a backwater of the Soviet orbit was one thing; seeing South Korea fall to naked aggression was quite another. The initial American response was measured—air and naval actions against the north, and additional materiel support for the ROK defenders. However, the fall of Seoul, less than four days after the invasion, clearly demonstrated the need for American ground forces.

Douglas MacArthur's Eighth Army in Japan was hardly prepared for a major ground commitment, but there was no time to flesh out depleted regiments, or to replace worn equipment. If the North Koreans were to be stopped, time was of the essence. MacArthur sent Maj. Gen. William F. Dean's 24th Infantry Division, because the division was located near Japanese ports closest to Korea. The division landed in Pusan in early July. Two reinforced companies (*TASK FORCE SMITH*) made the initial American contact with enemy forces and were badly bloodied. The war began to exact its terrible toll on the American soldier.

Lt. Col. Peter C. Hyzer's 3d Engineer Combat Battalion arrived on 5 July in support of the 24th Infantry Division. These men were the first engineers to enter combat, and they, like many other engineers who followed, served as technicians and as infantry—builders and fighters.

During the four or five weeks following the Communist invasion, Americans fought a series of battles against overwhelming odds, while retreating into a defensive perimeter around the Korean port of Pusan. During this retrograde action, the engineers often were simultaneously blowing bridges and building them, clearing minefields and planting them, destroying port facilities and establishing them. Then, there was the endless crush of refugees—always the refugees who, through no fault of their own, often seriously impeded the engineers' operations. Whenever possible, the Army's engineers helped ease the sufferings of these people.

In August-September 1950 the UN forces fought a series of engagements along the defensive positions, all the while building up strength for an offensive

northward. During the North Korean sharp attacks against the Naktong River line, the 2d Engineer Combat Battalion fought stubbornly as infantry defending its positions.

In a bold stroke to seize the momentum, on 15 September 1950, MacArthur conducted a successful joint amphibious landing at Inch'on deep behind enemy lines. Engineer units, including the 19th Engineer Combat Group, the 2d Engineer Special Brigade, and the 73d Engineer Construction Battalion went ashore at Inch'on, assisting the Marines in the assault landing and in their crossing of the Han River, south and southwest of Seoul. The 13th Engineer Combat Battalion also landed to support the 7th Infantry Division with road building and bridging.

The closely timed Eighth Army breakout from the Pusan Perimeter found the 2d Engineer Combat Battalion laboring to construct floating bridges over the Naktong for the march northward. Soon thereafter, these engineers also had to bridge the Kum River, where the 3d Engineer Combat Battalion had destroyed the bridges in July during the earlier retreat south.

The North Korean forces, at the end of a long supply line, were in retreat. The Inch'on landing threatened to cut them off from the rear, while unremitting American air attacks made life hazardous. The UN forces moved northward and recaptured Seoul by the end of September 1950.

With the successful Inch'on landing and the Eighth Army breakout from the Pusan Perimeter, the immediate question was how far the UN forces should advance. MacArthur advised the Joint Chiefs of Staff (JCS) that all available Corps of Engineer troops would have to concentrate on repairing the rail lines from Pusan to the 38th Parallel. Air operations had utterly devastated the communications links on both sides of the Parallel. As Eighth Army approached a junction with X Corps' forces near Seoul, officials in Washington (including the JCS) determined that MacArthur should pursue and destroy the North Korean forces. While the UN debated whether UN forces should cross the 38th Parallel, MacArthur received presidential authority to do so.

Lt. Gen. Walton Walker's Eighth Army attacked north from Seoul, capturing the North Korean capital of P'yongyang in October. The 3d Engineer Combat Battalion cleared the highway north to Sinanju, improving it as the main logistical road for Eighth Army's projected drive to the Manchurian border. This roadwork was often accompanied by mine removal, and the Communists frequently used wooden box mines that were difficult to detect and dangerous to remove.

X Corps, under Maj. Gen. Edward Almond, was extracted from Inch'on and moved by sea to Korea's northeast coast. MacArthur, knowing the condition of the roads and shattered rail lines south to Pusan, recog-

nized that the entire UN force could not be supplied this far north through Pusan. Wonsan would have to be cleared of mines and opened as a supply conduit. After an amphibious landing in late October at Wonsan, which had already fallen to ROK forces, X Corps joined the attack northward toward the Yalu River. American troops began talking about going home for Christmas. It was not to be.

Communist Chinese Forces (CCF), having already infiltrated the area, fought with ROK units near the Yalu. In November CCF units ambushed the 8th Cavalry Regiment, 1st Cavalry Division, near Unsan, as enemy guerrilla activity intensified throughout Korea. MacArthur ordered the Yalu River bridges bombed for the first time, but still the CCF entered the conflict in waves. A new and dangerous phase of the Korean conflict had opened.

Despite these new threats, the American and ROK forces pushed forward in X Corps area. In mid-November the 17th Infantry, 7th Division, reached the Yalu, but on Thanksgiving Day UN forces were ordered to retreat south. Chinese forces opened a major offensive, striking Eighth Army, especially 2d and 25th Infantry Divisions, along the Ch'ongch'on River in the west and the 1st Marine and the 7th Division in the east near the Changjin (Chosin) Reservoir. More often than not, the fighting disintegrated into a series of company-sized engagements. The 2d Engineer Construction Battalion was especially hard hit while fighting through Chinese roadblocks as the 2d Division disengaged and moved south. Gen. Walker, fearing envelopment from the east, struggled to save Eighth Army.

In the east, engineer units were instrumental in X Corps' evacuation from Hungnam. They kept the roads to the North Korean port open for the 1st Marine Division, 3d Infantry Division, and 7th Division to reach the coast, while erecting obstacles behind the American units to slow any Communist pursuit. During the outloading, the 2d Engineer Special Brigade operated the dock facilities. The 10th Engineer Combat Battalion and Navy demolition teams then destroyed the port, after the last American units—along with thousands of civilian refugees—departed on Christmas Eve 1950.

The Communist forces launched a major offensive across the 38th Parallel on New Year's Day 1951, recapturing Seoul in a matter of days. After regrouping along the 37th Parallel, UN forces resumed the offensive, only to run into a severe Chinese counterattack at Chip'yong-ni in early February. At Chip'yong-ni, men of the 2d Engineer Combat Battalion distinguished themselves fighting as infantry, by now a familiar scenario for engineers in Korea. UN forces retook Seoul in mid-March, more for its political and psychological effect than for its military value (apart from the Kimpo Airfield). The fate of the South Korean capital was indicative of the ebb and flow of the fighting. Between the initial

North Korean invasion in June 1950 and March 1951, Seoul changed hands four times and very nearly did so again during another Chinese offensive in April.

During their offensive of April-May 1951, the CCF suffered heavy casualties. UN units once again drove north, reaching the 38th Parallel by mid-June, and moved into defensive positions along the *KANSAS LINE*. This defensive position began in the west near the mouth of the Imjin River, some 20 miles north of Seoul, and ran across the breadth of Korea to Yangyang on the east coast. Preliminary peace discussions began in July at Kaesong, followed by more extensive armistice negotiations in November at Panmunjom, five miles to the east.

Hill fighting marked the conflict thereafter. In a prolonged series of limited engagements and seesaw battles for Korea's high ground, hills with names such as Bloody Ridge, Heartbreak Ridge, Pork Chop Hill, and Old Baldy came to symbolize the Korean experience for many American fighting men. Because of the terrain, engineer units sometimes used aerial tramways to get men and materiel to the ridges. Although limited in objective, the punch and counter-punch engagements for position often involved savage fighting and persisted until the cease-fire was signed on 27 July 1953.

During the years of fighting, the extreme weather conditions and rugged topography placed a severe strain on the men and their equipment. The engineers' oral histories are peppered with references to the dusty Korean "roads," and the Herculean efforts required keeping those same roads open during the monsoon season. Starting in mid-June and lasting for six or seven weeks, the monsoon season, with its torrential downpours, turned roads covered in dust "like talcum powder" into muddy tracks. Trucks and heavy equipment would sink down and become hopelessly stuck. Consequently, considerable engineer energy was devoted to improving the drainage and slope of the roads. Travelling mostly on foot with limited armor, the enemy did not find the rains as worrisome.

Over the years, most of the trees had been cleared from the Korean hills. When it rained heavily on these defoliated hillsides, the ground was not able to absorb the rainfall. The waters swelled the rivers much more quickly than under normal conditions, often causing unanticipated flooding in the valleys. In only a matter of hours, a dry streambed might be transformed into a river filled with eight to ten feet of rushing water.

The harsh winters also were a shock. Several of the officers commented on the frigid temperatures, even those accustomed to colder regions in Europe and the United States. Military planners did not take the cold into consideration, so winter clothing was not available for most of the troops that first year. Moreover, the troops were expected to be home no later than Christmas 1950. The arctic temperatures caused some of the equipment to freeze up and certainly compounded the difficulties

of maintenance and repair. The engineers who were building bridges needed to spend considerable time in icy water, exposing the men to the harsh elements and making their jobs much more unpleasant. Sometimes, however, the ice permitted movement across a frozen river, such as the Han, without a bridge.

Rough terrain and flooding rivers impeded the engineers' efforts to facilitate the movement of men and materiel. Both the saturated lowlands and the rocky uplands made road building and maintenance difficult. The sudden tendency of Korea's rivers to rage and flood made bridging a nightmare. Three years of adapting to the geography and terrain of Korea burned the names of several rivers—the Naktong, Kum, Han, Imjin, Twinnan, and others—into the memories of those who served.

Soon after the American military entered the Korean conflict, it found that Korea's rudimentary roads, bridges, and railways were incapable of handling the needs of a mechanized army. Engineers were charged with the task of redesigning, strengthening, maintaining, and building the MSRs from the ports of arrival to the front lines. From crowded ports, the routes often ran across rivers and rice paddies, through minefields, and up into the mountains.

Most of the troops and supplies arrived by ship. Some ships in the harbor at Pusan, loaded with engineers' supplies, waited for months to be unloaded. Removing obstacles and mines from the ports was largely an engineer responsibility. Engineers also assisted in the unloading process, moving the supplies to shore and using cranes for heavy lifts from landing crafts. The 50th Engineer Port Construction Company built port facilities and also laid miles of underwater pipeline to bring fuel ashore from tankers. Their master divers also were valuable in assisting with underwater ship repairs. Consequently, the engineers had significant responsibilities in the ports during both landings and evacuations.

Once the ships were unloaded, the Korean railway system strained to distribute the supplies. The rail system both in North and South Korea quickly became overburdened when it became the principal method of clearing cargo from the ports of Pusan and Hungnam. Repairing damaged rail lines, especially between Pusan and Seoul, became critically important, and that task fell largely to the engineers.

Faced with a torrent of incoming materiel, the depots quickly became swamped and did not have the capacities to absorb the supplies. In the first year of the conflict, so many supplies accumulated in the depots that finding the necessary items involved searching through piles of materiel that had not been organized or sorted. After awhile, engineers built additional depots to house the materiel. The depot system became more organized over time, and workers were held more accountable for the supplies.

Korean roadways, which were mostly unpaved, were not built to carry the military's heavy equipment. The engineers were tasked with adding a gravel base on the roads. This responsibility often included quarrying and crushing the rock as well as spreading it on the roads. Putting in proper culverts and drainage to control water runoff also was an important and time-consuming part of roadwork.

Because of the fluid nature of the fighting during the early stages of the war, bridges, often crucial for the MSR, had to be designed, built, destroyed, and then rebuilt. Several different types were used, including treadway bridges, Bailey bridges, aerial tramways, and ponton bridges. Engineers had to determine which type of bridging would suit each particular crossing and consider its use as well as cope with the available bridging supplies. At times, the engineers provided ferry service for river crossings. Demolition often was necessary so as not to leave things behind that might be useful to the enemy. Of course, there were the "pitfalls of over-destruction." Some things that the engineers had been ordered to blow up were needed later, so engineers had to build a few bridges over and over again.

Keeping the supply route open would have been difficult under advantageous conditions. The job became far more challenging in a combat situation with the hazards of mines, mortar attacks, and enemy fire.

At the beginning of the war, the Army Corps of Engineers' officers felt the lack of readiness acutely in the areas of equipment and supplies. Much of their equipment was old and worn, dating from World War II. Reclaimed from the Pacific area through the "roll-up" plan of the Far East Command, many vehicles were in bad repair and some were even towed as they were loaded up to be sent to Korea. Chronic part shortages and maintenance problems also plagued many of the engineers.

A number of officers in charge of maintaining the roads emphasized the shortages of bulldozers, angledozers, and cranes, especially the first year. To make matters worse, there also was a severe shortage of spare parts to repair trucks and broken equipment. Because the equipment and parts were not generally standardized, and units received a variety of different types and models, the problems were magnified.

Shortages of materiel often were felt in one area but not in another. One engineer described having shiploads of barbed wire while another officer was desperate for wire. Another officer's requirement for concrete was filled until he had concrete "coming out of his ears." One unit traded homemade ice cream for badly needed nails. The lack of functioning generators and the necessary spare parts caused great frustration, especially since so many other pieces of equipment depended upon them.

The engineer bridge builders complained there was an insufficient supply of lumber, bent connections for interlocking steel, and no pile-driving equipment. As one officer mentioned, there was never enough bridging!

The troops had to cope with their situations as best as they could, especially during that hectic first year. Parts were regularly cannibalized from several vehicles in order to make one vehicle run. "Scrounging," the term one officer used for looking around depots and other areas and taking anything that was useful, was another way many officers managed. Sometimes, this meant actually taking supplies and equipment belonging to other units. The "Good Old Boy Network" served as an informal and expedient means of meeting the needs of some units. Salvaging scraps and abandoned equipment was another means of surviving the shortages.

Unfortunately, failure to keep strict accountability and the temptation of large quantities of materiel led to abuse by both military personnel and Korean nationals. Pilfering was a pervasive problem, which ranged from the disappearance of whole trainloads of supplies to small-scale pilfering. Many of the stolen items ended up on the black market, which thrived during the war. Some Americans even resorted to using the black market as a source of supplies when the normal supply lines failed them.

Initially, an automatic supply system determined which supplies were sent to Korea. Further complicating the situation, engineer equipment was shipped to Korea without real consideration for its condition or usefulness. By the spring of 1951 the engineers had a better understanding of their requirements and began evacuating some of the inoperable equipment from Korea. They began requisitioning specific types of heavy construction equipment and improving the facilities at the supply depots. With the help of thousands of Korean laborers, engineers built roads and bridges that facilitated the movement of men and materiel. A heightened awareness of the situation in Korea helped the military supply people back in Tokyo respond to the requests more effectively.

The UN's quick offensive into North Korea in the fall of 1950, followed by the rapid retreat a few months later, left men on the front lines short of necessary supplies. The bitter cold of the Korean winter made the lack of sufficient winter clothing a particular hardship, and the sub-zero temperatures wreaked havoc on the equipment that first winter. During the fall of 1951 the fighting was more static, making the distribution of supplies easier. By then, items of winter clothing were widely available even though the frigid temperatures continued to hamper the men and their operations. As the engineers became more aware of the operational realities of building and fighting in Korea, they were able to make appropriate modifications to their equipment and supplies. Over time, they were able

to allevi-ate many of the materiel problems they had originally experienced. Nevertheless, problems with the supply system continued to some extent for the duration of the Korean Conflict.

The resilience and ingenuity of the engineers themselves were key ingredients of their success. The engineers made do with what they had. When roadwork required huge numbers of sandbags, the men simply filled straw rice bags, which were readily available, with sand. When faced with the awesome challenge of bridging a chasm during the retreat from the Changjin (Chosin) Reservoir, Army engineers figured out a way to air drop a bridge, and the Marines on the ground wrestled it into place. Without other means of communication, one engineer, stranded on a beach, spelled out "HELP! US TROOPS" in powdered milk on a runway to hail a plane flying above. In short, the actions of these men and many others testified to the fundamental resiliency and resourcefulness of the American soldier.

Training for the men serving in Korea, however, was not always adequate. A number of second lieutenants, members of the West Point Class of 1950, were thrust into combat without attending their designated branch basic course. For other engineer officers, the Korean War meant working with enlisted men whose skill levels and technical expertise varied widely, often depending upon whether or not these men had experience in World War II. More than one of the officers commented on the need to improvise training sessions and on-the-job training opportunities, for in Korea the men grappled with unfamiliar and difficult engineering tasks, especially in such areas as road building and bridging.

Several engineer officers believed that the troop rotation policy had a negative effect on morale, and addressed the problem of securing adequate troop replacements. Other officers discussed the unfairness of calling up individual inactive reservists instead of entire Ready Reserve units.

Other personnel issues impacted performance and could not be ignored. Race relations in Korea were not always smooth and the underlying tensions were exacerbated under the stress of combat. In May 1951 Lt. Gen. Matthew Ridgway formally requested authority to abolish segregation in Eighth Army. Integration followed, and although it was not without its awkward moments, it was generally successfully. First Lieutenant Floyd Wright's 573d Engineer Ponton Bridge Company was the last segregated Army unit in Korea. The interviewees frankly discuss the issues integration raised. Other engineers described their experiences working with Korean laborers. KATUSAs and other Korean workers performed much of the physical labor, and several of the engineers relied heavily on their efforts.

The experiences of the engineers varied considerably. As in the wars before and after Korea, the burden felt by the individual soldier depended largely on where

he was and what he was expected to do. Naturally, the perspective of an infantryman in front-line combat was different from that of a man in the rear areas of Korea. Although some experiences were shared, their stories about supplies, temperature, food, and fighting varied considerably. Certainly, an engineer serving in the 2d Engineer Combat Battalion, which lost all of its equipment and suffered more than 500 casualties, had a far different story than someone serving in a unit where conditions were not too dissimilar to peacetime assignments.

For the engineers, the fundamental personnel issue during the Korean War was how engineer troops were used. Should the engineers routinely be used as infantry? Historically, the broad mission of U.S. Army engineers has always been to facilitate the deployment of American and allied forces, while impeding the progress of enemy forces. This dual mission was central to the engineers' experiences in Korea, and in that sense, the conflict was no different than the nation's previous wars. As several of the interviews make clear, the fulfillment of this mission often meant that engineers in Korea also served as infantry. Generally, expediency and the course of the war dictated their roles more than their training and skill designators.

What of the other side of the coin, where engineer units were filled out with infantry soldiers? And how should an engineer unit be used—as a distinct engineer combat battalion, remaining together, or as companies, scattered amongst the division's infantry regiments? The oral histories reveal that both arrangements were used in Korea, and the question remained unresolved at the end of the conflict.

Whatever their assigned roles, the engineers battled the enemy in a hostile environment, faced challenging personnel issues, and devised innovative ways to cope with their missions. The ebb and flow of the fighting made the engineers' job more difficult. The fluid nature of the fighting front would not be matched until the Vietnam conflict. With the cessation of hostilities, the sense of total victory that came with the end of World War II was absent in Korea. Army engineers felt the same understandable frustrations as other American and allied servicemen who did their duty and then simply went home.

During the three-year conflict on the peninsula, the engineers contributed, disproportional to their numbers, to the effectiveness of the regimental and corps units they supported. As one officer noted, the engineers were clearly a "force multiplier" for UN forces throughout the conflict, and in doing so they added another proud chapter to the history of the U.S. Army Corps of Engineers. The interviews in this volume provide a real and very personal glimpse of a few of the officers whose skill, courage, and dedication were the hallmarks of the engineers' contribution to America's "forgotten war."